Understanding Net Present Value

A presentation created in April 2013 by Ariel Speser and Brian Haaland

Time	Screen Text	Narration
	1. **Title**	Welcome to Understanding Net present Value. This presentation was created by Brian Haaland and Ariel Speser, attorneys with the Northwest Justice Project's Foreclosure Prevention Unit.
	2. **What is it?**	If you're a foreclosure mediator, you've probably heard of the "NPV." You may be wondering, though, just what exactly is it? During this presentation, we will explain what the NPV is, how it works, and give you some practical tips for using two different types of NPV analysis. The NPV, although somewhat intimidating at first, is an invaluable part of the foreclosure mediation process. Understanding the NPV, and how it relates to loan modifications, will facilitate successful and productive foreclosure mediations under the Foreclosure Fairness Act. So, what exactly is the NPV? - NPV stands for "net present value," which means evaluating the costs of loan modification compared to foreclosure. - NPV is the mortgage industry's standard for determining a homeowner's eligibility for a loan modification - NPV is an objective way to determine if a loan modification is in the financial best interest of the beneficiary NPV provides the framework for a productive Foreclosure Fairness Act mediation because it requires the parties to share and exchange key information about the loan, property, and borrower's financial situation. This transparency allows the parties to have a frank discussion about whether or not a modification is affordable for the homeowner and profitable for the lender.
	3. **Two Types of NPV**	There are two NPV tests used under the Foreclosure Fairness Act .There is the HAMP CheckMyNPV test and the FDIC test. The HAMP CheckMyNPV test was created by the U.S. Department of Treasury as part of the Making Home Affordable Program. It's commonly referred to as simply "CheckMyNPV" or "HAMP NPV." We will discuss CheckMyNPV as it relates to three variations of HAMP loan modifications: HAMP Tier 1, the Principal Reduction Alternative, and HAMP Tier 2. The FDIC NPV calculator was created by the Federal Deposit Insurance Corporation during the resolution of IndyMac Federal Bank. It's also commonly referred to as the "Mod in a box" or "FDIC spreadsheet."
	4. **NPV in FFA Mediation**	Under Washington's Foreclosure Fairness Act, , the NPV test *is* not required. However, the beneficiary <u>is</u> required to provide the NPV inputs. The mediator may also require the parties to run the NPV calculation <u>during</u> mediation. If the servicer participates in HAMP, they can use the HAMP test available at CheckMyNPV.com. Otherwise, they can use the FDIC test.

	5. Which NPV Test to Use?	We recommend that mediators run <u>both</u> the FDIC and HAMP tests. Each test has a positive and a negative. Additionally, each test provides different outputs. FDIC is commonly used to provide a dollar figure, which is very helpful, especially if there is no agreement reached at mediation. The mediator must provide the test used and a dollar amount value in the mediator's certification submitted to the Department of Commerce. The HAMP test does <u>not</u> provide a dollar amount. However, it does show whether the homeowner will qualify for a HAMP modification and gives specific proposed modification terms. Remember, the servicer is the one who participates in HAMP and they are the one you most often see at mediation. The beneficiary may be Fannie, Freddie, FHA, or a private investor. At mediation, you will be dealing with the servicer, so it's important to determine whether the servicer participates in HAMP or not. Look on the HAMP website to see which servicers participate in HAMP.
	6. Most Important Tips	We'll go through everything in much more detail, but we want to let you know up front what we think are the most important points to remember when running an NPV: 1. Confirm the Discount Rate 2. Confirm the Re-Default Rate 3. Actually, confirm all the data inputs 4. Remember, it's just math
	7. Freddie Mac Rate	One thing you'll always want to do before running an NPV is check the current Primary Mortgage Market Survey rate (more commonly referred to as the "current Freddie Mac rate.") This is the industry's current interest rate and is central to determining the discount rate in both the FDIC and the HAMP tests. This table is from the Freddie Mac website. It shows the weekly primary mortgage market survey rate for April 4th 2013. You can see the rate is 3.54%.
	8. HAMP NPV Overview	The basic goal of the NPV analysis is to arrive at a "positive" or "negative" NPV. When there is a positive NPV, it means the value of modification is greater than if the loan is not modified. When there is a negative NPV, it means the value of the modification is worth less than if the value of the loan is not modified. Every homeowner will have a unique NPV result because it is always based on the specific homeowner's income and loan information. No two homeowners are exactly alike.
	9. HAMP Tier 1 Standard Waterfall	This is the standard **HAMP Tier 1 waterfall**. Each of these steps is taken in sequence to determine whether and how the homeowner can reach an affordable monthly payment at 31% of their gross monthly income. Before starting the waterfall, the servicer should determine the homeowner's <u>current</u> **debt to income ratio.**

		The first step in the waterfall is **capitalization**. Capitalization involves adding together the unpaid principal balance and other amounts owed, including past due interest, foreclosure fees, and escrow advances. Note that HAMP modifications will forgive late fees. The second step is to **reduce the interest rate**. HAMP does step-reductions in interest rates all the way down to 2%. If the interest rate is reduced all the way to 2% and still the homeowner still hasn't achieved a monthly payment at 31% of their gross monthly income, the NPV will proceed to the third step in the waterfall, **term extension.** According to HAMP guidelines, the term can be extended to 40 years (or 480 months). The NPV will extend the term month by month to try and reach the 31% payment. If it reaches the maximum term of 40 years and still hasn't reached 31% it will proceed to the 4th step, **principal forbearance.** **Principle forbearance** essentially splits the modified unpaid principal balance into two sections. One is amortized and pays interest; the other is non-interest bearing and essentially acts like a balloon payment due at the maturity of the loan.
	10. HAMP NPV Data	These are inputs for a standard HAMP Tier 1 waterfall. We'll go through each one briefly and discuss the sources of the information. The first one is the **Unpaid Principle Balance**, or UPB, and can be found in a number of places, including the Notice of Default, the Notice of Trustee's Sale, or the beneficiary's disclosures, specifically in the **account history** section. You can calculate the "**current remaining term**" in two steps. First, figure out how many months have passed between the first payment and the day you run the NPV test. Then, subtract that number of months from the overall term of the loan. The result is the **"current remaining term."** Normally, the **amortization term** is the same as the maturity date of the loan. For example, if the loan is amortized for 30 years, the maturity date is 30 years from the date of origination. Sometimes the loan is amortized on a 40 year term and the maturity date is less than 40 years. **Monthly gross income** can be found from the homeowner's disclosures, specifically from the **request for mortgage assistance** (or "RMA") that the homeowner submitted for mediation. It can also be found in the beneficiary's disclosures. Remember, this is the homeowner's monthly "gross income" and not net income. If you have a homeowner who has non taxed income, for example, Social Security, we "gross it up". Grossing it up simply means multiplying the income by 1.25%, which gives an estimate of what their gross income would be if it were taxable. The reason for doing this to treat all homeowners equally, whether their income is non-taxable or taxable wages.

It seems like it should be simple to find the **current payment amount**, but if we're dealing with an adjustable rate or interest-only loan, the payment can be difficult to determine because it changes. The best way to accurately determine the current payment is to look at the account payment information provided by the beneficiary in their disclosures or one of the homeowner's recent mortgage statements.

The **current interest rate** can be found by looking at the original promissory note provided in the beneficiary's disclosures. If the homeowner has a fixed interest rate, the interest will be the same as on the original note.

However, if the interest rate is adjustable or interest-only, you'll want to figure out the re-set rate and determine when the next re-set date is scheduled to occur. CheckMyNPV will ask whether it is a fixed interest or not. If you select "no", it will ask if the interest rate is scheduled to re-set within the next 120 days. To determine what the next re-set interest rate will be, you can check the promissory note, which will specify which index system is used to adjust the interest rate. For example, the note might specify that the interest rate will be adjusted based on the LIBOR rate.

If it is an adjustable or interest-only interest rate, it's good practice to double check this figure with the servicer at mediation because often the servicer provided information that was current at the time documents were exchanged but is out-dated by the time parties attend mediation. **Delinquent interest** is interest that has accrued since the homeowner defaulted on the loan. Another place to find the delinquent interest is to look at the **payoff schedule** included with the beneficiary's disclosures. Quite often, the delinquent interest provided in the beneficiary's disclosures is incorrect.

The **mark to market loan to value ratio, or MTMLTV,** is the ratio of the property value to the loan value. The property value commonly used is the Broker's Price Opinion or BPO, included in the beneficiary's disclosures. Sometimes the BPO is significantly different from the tax assessor's value, or a value you might find on Zillow, or Redfin. The loan value is the Unpaid Principle Balance plus the arrears.

In some cases, HAMP allows a homeowner to contest a property valuation and the homeowner can submit written evidence of what they think the value may be. It may be tax assessor's evaluation, or a valuation on Zillow or Redfin. If the bank accepts the homeowner's property valuation, the story ends there. If not, then an **appraisal** is required. HAMP guidelines require the homeowner to contribute $200 dollars up front towards the appraisal fee and pay the remaining amount of the appraisal if they get a modification.

The amount of **taxes, insurance, and HOA dues** can be found in the beneficiary's disclosures in the "Account History" section. You can double-check these figures on the tax assessor's website.

		The **tax calculation** is more complex than just taking the yearly taxes due and dividing by twelve to get a monthly value. The servicer is allowed a certain cushion, so that value may be a little higher than what you determine from the tax assessor's website. Calculating the **insurance payment** may be complicated. Oftentimes the homeowner is unsure how much the insurance costs every month. You may look at the account history to see how much the servicer has paid in the past year towards the insurance. Take that value and divide by twelve to get a monthly figure. Normally, the homeowner will know if they belong to an **HOA** and how much those fees or **dues** are per month, so that figure is usually easy to find. The funds remaining in any existing **suspense account** can be found in the account history. The suspense account is a kind of a holding area that servicers use when they receive a payment that is less than the full monthly payment required by the note. For example, if the full payment is $1,000 dollars per month and they receive $750 dollars, they will put the partial payment in a suspense account. Once the suspense account grows to a number greater than one full monthly payment, the servicer is supposed to take the $1,000 payment out of the suspense account and credit the account.
	11. HAMP Principal Reduction Alternative Waterfall	This is the **HAMP alternative modification waterfall.** We see the first step is the same as the standard waterfall—it is **capitalization**. There is a new step inserted prior to the interest rate reduction, though. Step 2 in the alternative waterfall, is the **principal reduction alternative** or "PRA." The goal of the PRA is to reduce the principal balance on the loan to a level where the monthly payment is 31% of the homeowner's gross income or the mark to market loan to value ratio is 115%, whichever is reached first. If the beneficiary can reach a monthly payment of 31% by using the PRA then the pre-modification interest rate and remaining loan term will stay the same. If the PRA step does not achieve an affordable monthly payment or a Loan to Value Ratio of 115%, then we proceed to step 3, **interest rate reduction**. The interest rate may be lowered to 2% to try to hit the target 31% monthly payment. If 31% is not achieved through interest rate reduction, the waterfall goes on to step 4, **term extension.** The term can be extended month by month to a maximum of 480 months. If 31% is still not obtained, the waterfall goes on to step 5, **principal forbearance.**
	12. When to use HAMP PRA?	**When do we use the alternative modification waterfall?** According to HAMP guidelines, servicers are required to use the principal reduction alternative waterfall if the Loan to Value ratio is greater than 115% and they *may* use it on any loan where the ratio is greater than 105%.

	13. Principal Forgiveness	**Principal forgiveness** (or more accurately, principle reduction) comes in a couple different forms. Servicers may forgive a portion of the principal upfront or on a deferred basis. If the servicer is going to forgive some of the principal on a deferred basis, they will typically offer to reduce the principle by a certain amount but break it up into three years of stepped reductions. If the homeowner is on time with the first year of payments, 1/3 of the "forgiven" principle reduction amount will be granted. After the second year, another 1/3 will be forgiven. By the end of the third year, the entire principal reduction amount will be forgiven. Not all beneficiaries forgive principle but you can check www.makinghomeaffordable.gov to find out of if a particular beneficiary offers principal reductions.
	14. HAMP Tier 2 Waterfall	Now we're going to talk about **HAMP Tier 2.** While HAMP Tier 1 uses debt to income ratio of 31%, HAMP Tier 2 uses a slightly different ratio. There are some other major differences between the tiers. **Capitalization** is the same in both tiers. The **interest rate reduction** is slightly different, though. The Primary Market Mortgage Survey or "PMMS" rate that we used in Tier 1 is also used here in Tier 2, but with an additional risk adjustment figure. In HAMP Tier 2, the servicer will take the current Freddie Mac rate, say 3.54%, and round it up to the nearest $1/8^{th}$ of a point and then add a risk adjustment. A risk adjustment can be up to 50 basis points or ½ percent. For example, a 3.54% interest rate would be rounded that up to 3.625%. Then a maximum risk adjustment of ½ of a percent would be added to that to come up with a final interest rate of 4.125%. In this particular example, that would be the maximum current HAMP Tier 2 interest rate. **Term extension** in Tier 2 is similar to Tier 1. HAMP Tier 2 also allows for **principal reduction and forbearance.** There are several differences between HAMP Tier 1 and Tier 2. - The GSE's (Fannie and Freddie) do not participate in HAMP Tier 2. - HAMP Tier 2 is looking for a debt to income ratio of between 25% and 42%. This is obviously a a broader range than Tier 1 (which has a target of 31%). - An important restriction on HAMP Tier 2 is that the principal and interest payment must be reduced by at least 10% from the pre-modified payment. - Some homeowners are only eligible for Tier 2 and not Tier 1. For example: - Homeowners who have already defaulted on a Tier 1 and - Homeowners who were denied a Tier 1 because of a negative NPV analysis, excessive forbearance or because their debt to income ratio is already less than 31%.

	15. Prohibitions on Waterfall steps	There are sometimes prohibitions on which waterfall steps may be used in a **pooling and servicing agreement**, an **investor-servicer agreement**, or a servicer's own guidelines. For example, there may be a restriction on how low the interest rate can go, or how long the term can be extended. If this is the case, the servicer must show: - the source of the restriction, - proof of reasonable efforts to seek a waiver, and - evidence of approval or denial by the investor. These steps are HAMP guidelines and also required by Washington's Foreclosure Fairness Act.
	16. NPV outcomes	Here we can see the different possible outcomes for the CheckMyNPV model. You can see that homeowners are reviewed for both HAMP Tier 1 and HAMP Tier 2.
	17. OCC Chart	The **Office of the Comptroller of the Currency** (or OCC) publishes a **Mortgage Metrics Report.** The one shown is for the third quarter of 2012. The OCC provides this report, which is fairly long and has many different tables. This chart shows how different kinds of investors utilize different steps of the waterfall at different rates. For example, if the investor is Fannie or Freddie, they will almost never use **principle reduction.** But private investors and portfolio loans have much higher rates of **principle reduction.** For loans that are serviced and owned by the same entity, there are fewer restrictions and thus a higher rate of **principal reduction.** Almost all types of investors utilize **interest rate reduction** and **term extension.** However, private investors use **term extension** at a relatively lower rate because there are often restrictions in the **pooling and servicing agreements** that affect all the terms of all loans in a particular pool.
	18. HAMP CheckMyNPV	Now we're going to run through a sample scenario using the HAMP CheckMyNPV test.
	19. CheckMyNPV Investor	After agreeing to the terms of use, this will be the first screen you see on CheckMyNPV.com. First, you have to check if it's a Fannie, Freddie or other loan. Remember that Fannie and Freddie do not participate in HAMP Tier 2 and must use the current Freddie Mac rate as the discount rate. For our example, we're going to assume that the investor is not Fannie or Freddie, and that it's either a Trust or a portfolio loan.
	20. CheckMyNPV Selecting Mortgage Servicer	When we select **other**, we see a drop down list of servicers. Remember that we're looking at the servicer now and not the beneficiary. The beneficiary may be a trust, but for now we're using the servicer's information. I have highlighted Wells Fargo Bank as an example because they have a proprietary NPV model and their assumptions are built into the CheckMyNPV test. In CheckMyNPV, the base discount rate is always the Freddie Mac rate. Some servicers are occasionally allowed to add a discount rate premium to the Freddie Mac rate.

	21. CheckMyNPV Discount Rate	In this example, we've selected the servicer as "other," so it's not one of the major servicers listed on the previous slide. The next question addresses the **discount rate premium.** HAMP allows servicers to add a discount risk premium anywhere from 0 to 250 basis points (also referred to as 2.5%). If the servicer chooses the maximum discount rate premium of 2.5%, the discount rate would be the Freddie Mac rate plus 2.5%. Whenever you have a higher discount rate, you're less likely to get a positive NPV result and therefore a modification.
	22. Discount Rate Risk Premium	The number of servicers using the discount rate risk premium has decreased from 10 in 2010 to 4 in 2012. As of June 2012, Wells Fargo and Bank of America are still using a higher risk premium. Most of the time you can assume that no risk premium will be used, but it's important to make sure that the servicer is not using one, because, if you look at these figures from **SIGTARP** (that's the **Special Inspector General for the Troubled Asset Relief Program),** you can see that in a 2012 a sample of 51 denied applications, 27 would have tested positive had the servicer not used a risk premium.
	23. CheckMyNPV Homeowner and Property Information (Gross Monthly Income)	The **data collection date** is used to determine several other important inputs. The data collection date can be any date within 90 days of running the test. The next question asks whether the homeowner is residing in the property. For homeowners attending mediation, this answer will always be yes. You will occasionally find the **homeowner's credit score** in the beneficiary's disclosures, but if not, using 550 is a fair approximation. In this example, we're assuming the homeowner's gross income to be $3,700 dollars.
	24. CheckMyNPV Evaluation Property Information	CheckMyNPV uses the state and zip code of the property to determine price appreciation in the local area and also future property values. The property value, is determined by the beneficiary's Broker Price Opinion (or "BPO") but can be cross checked by looking up the property value on the county assessor's website. For **Property Valuation type**, you have three choices: **exterior BPO/appraisal; interior BPO/appraisal; and AVM**, which is automated value. Most often you will be using the exterior BPO/appraisal. If you are using the assessor's website, Zillow or Red Fin, you should select **automated value.**
	25. CheckMyNPV Mortgage Information	You can look on the original promissory note in the beneficiary's disclosures to find the: - **Original loan amount** - **First payment date** - Whether it's a **fixed rate mortgage** or not and the - **Interest rate of the mortgage**

		To determine the **unpaid principal balance**, you can look at the Notice of Default, Notice of Trustee's Sale or account history or payoff schedule provided with the beneficiary's disclosures. To determine the **total first mortgage debt**, we want to imagine what the modified principal balance will be. So we can add the current unpaid principal balance, accrued interest, taxes that have been advanced, insurance payments to third parties, HOA dues (if any), and other costs. If you selected "no" **fixed rate**, CheckMyNPV will then ask you for the re-set rate of the adjustable interest rate, which can be found in the promissory note. Typically, adjustable interest rates re-set every 6 months or so, so we would add 6 months to the re-set date until we get to the last re-set date.
	26. CheckMyNPV Mortgage Information, Continued	This is the next screen of the CheckMyNPV calculation: because we've entered the above data, some figures show up here, such as the remaining term: here it's 276 months. The **mortgage insurance coverage percent** is entered when a homeowner has mortgage insurance that covers the beneficiary in case the net proceeds from the sale do not cover the amount owed to the investor. If there is mortgage insurance and a negative NPV, the beneficiary may have partial insurance claim. For information on whether mortgage insurance is involved and what the coverage percent is, you might need to ask the beneficiary. If you're unsure of the mortgage insurance, just leave that at zero. You'll also have to ask the beneficiary if any **modification fees are paid by the investors**… the homeowner usually won't know. Sometimes the investor will reimburse fees like notary fees and property valuation fees. If you're unsure, just leave this at zero as well.
	27. CheckMyNPV Monthly Payment Information	To find the **monthly principal and interest payment, you can** look on the promissory note or in the account history. If it's an adjustable rate, you'll want to make sure you are using the current payment, as it may have changed if the interest rate re-set after mediation documents were exchanged. You can verify the current principal and interest payment with the servicer. CheckMyNPV breaks down the monthly payment and asks you to enter the principal and interest and then the taxes and insurance separately. Most homeowners make one monthly mortgage payment that is principal, interest, taxes, and insurance ("PITI"), so they may not know what the specific principal and interest break down is. As mentioned earlier, the servicer should know the current principal and interest payment, as well as the "escrow amount" which is the monthly real estate taxes and homeowner's insurance. It's always a good idea to double check these numbers during mediation. If a homeowner is approved for HAMP, their new modified monthly payment will include principal, interest, taxes, and insurance ("PITI") as part of the 31% target payment. **Real estate taxes:** you can find this number in the account history. You can also look at the tax assessor's website: for a rough approximation you can take the yearly tax amount and divide by twelve.

		Hazard and flood insurance: you can get this number from the account history. Typically hazard insurance is paid once a year. You can look for this payment on the account history sheet and divide by twelve. For **HOA fees**, you can ask the borrower for their most recent statement from the HOA. **Months Past Due:** A payment is past due if it is not received by the end of the month in which it is due. For example, if the payment is due on March 1, it is "**past** due" if it is not paid by March 31. **Imminent Default:** Typically, for most borrowers in mediation, Imminent Default is checked "no." Only check "yes" if they are current or less than 30 days delinquent.
	28. CheckMyNPV Evaluation Results	This is the final result page for the CheckMyNPV test. You can see the first line states: "Based on the information you provided you *may* be eligible for a HAMP modification." That's as positive as the results gets for "Check My NPV." Do not expect a "you definitely pass" …only a possibility of eligibility.
	29. CheckMyNPV Information calculated for you	On this next slide, we can see the terms of the proposed modification. We can see the **unpaid principle balance** of the proposed modification is the same as our current unpaid principle balance plus the arrears, the fees, and the costs. There was no **principle forbearance** granted in this example because (following the steps of the using the waterfall), they were able to get to an affordable payment of 31% just with steps up to and including **term extension**, so they didn't need to go to the extra step of **principle forbearance.** We can see the interest rate is 2%-- that is, of course, the floor for a HAMP modification. The principle and interest rate of the proposed modification is $861.70 And if we look at our gross income ($3700) you can see that is not 31%. When you see this payment, it's principle and interest only. The 31% includes principle, interest, taxes and insurance and any HOA fees. In our example, the taxes were $208, insurance was $63 and the HOA was $15 so we have a total of $286 in escrow payments. We have to add that $286 to the $861. Then we achieve 31% of the borrower's gross income. The term of the modification is 308 months. It could have been extended up to the maximum of 480 months. So we know that there was still room to extend the term further, if the borrower hadn't achieved a 31% payment. And beyond that, we could have used principle forbearance.
	30. CheckMyNPV New Assumption: gross income of $2200	So now we reran our Check My NPV test with a different assumption: I left everything else the same, only changed the gross income. Instead of $3700, I used a lower gross income of $2200. You can see how this changes our result. Again, the borrower received a passing result and the "Check my NPV" test said the borrower "may qualify for a modification." However, in this case, we're looking at an Unpaid Principal Balance of the Proposed Modification" of $130,768. In this case, the borrower would qualify for a **principle forbearance** of $76,000 and change.

		We can see the interest rate is 2%, as in the last example. Looking down a couple lines, we can see that the term has been extended to the maximum: 480 months. Whenever we see a term of 480 months, we know that the next step is principle forbearance. In this case, the borrower would be paying interest on $130,000, and $76,000 would be non-interest bearing-- essentially a balloon payment due at the maturity of the loan. If you look at the principle and interest payment, it's 396.00, Again, that's not 31% of the gross income because, we still have to add our escrow payments. if we add our $286 in escrow payments for taxes, insurance, and HOA to $396: we come out to $682 per month as a total housing payment. That $682 is 31% of $2200. Earlier, I stated that the output of these Check My NPV tests states the borrower "may" qualify. One of the reasons it's a "may" and not a "will" is that we don't know if this loan is owned by an investor and whether that investor has restrictions.
	31. FDIC Mod in a Box	Now let's look at the other common NPV test: FDIC's "Mod in a Box."
	32. Birth of FDIC's Mod in a Box	As a bit of history, the FDIC model was implemented in August 2008 after IndieMac failed in July of that year. By November of 2008, they had sent out 23,000 modification letters and completed 5300 modifications. Some of the assumptions that were built into this IndieMac model were similar to the HAMP model, which came out slightly later. Some similarities between the two analyses: - The target debt-to-income ratio in the FDIC model is the same as the HAMP tier 1: 31% - The FDIC model will capitalize delinquent interest, escrow advances and fees similar to the HAMP model. - The FDIC model will reduce the interest rate. In this case, the FDIC model has a default floor of 3%. - The FDIC model has a term extension that is slightly different than the term extension in the HAMP model. For the FDIC model, the remaining term is extended by 10 years (or 120 months). In the HAMP model, the term is extended month by month up to a maximum of 480 months. - The FDIC model allows for forbearance or splitting the capitalized balance into amortizing portion and a non-amortizing portion - Similar to HAMP, the FDIC model's payment is fixed for five years, and then it increases in steps until it reaches the PMMS rate or the Freddie Mac rate. One slight difference is that in the FDIC model, the payment must be reduced by at least 10%. If it's not reduced by at least 10%, the model will "fault out." What I mean by "fault out" is: will not get an output—it's not necessarily a pass or fail. We won't know whether it's a pass or fail until we can get the output.

	33. FAQs on the FDIC spreadsheet	Here are some reasons why we would use the FDIC spreadsheet: - Whether or not someone is eligible for a loan modification, we can see directly what the assumptions are for home price appreciation and for the re-default rate. In contrast, in the HAMP model, we can't see the prices for the re-default rate or the price appreciation. - Also, the FDIC spreadsheet provides a dollar figure. This becomes important when you have a mediation between parties that could not come to an agreement. If a Net Present Value test is required, then the mediator is required to provide that test and the dollar figure as the value of modification. You can't get this figure from the HAMP Check My NPV test—you would <u>have</u> to use the FDIC spreadsheet.
	34. FDIC NPV Calc #1	The FDIC spreadsheet is essentially an Excel spreadsheet. You're going to see different areas highlighted in gray, yellow and blue. We can see on this list what the different colors signify.
	35. Upper Left Q	The FDIC spreadsheet can be divided into four quadrants. On this screen you can see the upper left hand quadrant. For this example, we used the exact same numbers we used in the "Check My NPV" test so we can see differences and similarities. For the current Freddie rate, we enter 3.6%. It's important to get the accurate Freddie rate in the box because this becomes the discount rate for all Net Present Value tests in this spreadsheet. The default for the **program interest rate floor** is 3%. It's 3% because that was the floor for IndieMac back in 2008. But for our purposes, because our borrower in this case is HAMP eligible, we're going to use a floor rate of 2%. Here, most of the other terms, (the **loan amount, the terms, the rate, the current** UPB) are all the same as the HAMP model. When you enter the **property state**, the model is going to estimate what the escrow advances are. Occasionally, you will need to change this number. It's an approximation based simply on the state. And quite often, this is slightly inaccurate. You can see the current payment is broken into an interest portion and a principle portion. Often times, when you get NPV information from the beneficiary, they're going to send in information from the FDIC spreadsheet. You're going to want to go through each of these numbers and double-check what the beneficiary has provided. And as we've gone over in previous slides, it's easy to determine what these numbers *should* be. Quite often, some terms are inaccurate, including the **remaining term.** In fact, it's very rare to see a **remaining term** that is accurate. The **months past due** is often inaccurate. The **interest rate** is often inaccurate, especially with an adjustable rate mortgage. Often the original loan amount and the current unpaid principle balance *are* accurate. Moving down, the **current mortgage payment** is quite often inaccurate.

		The **past due interest** is often inaccurate. In the FDIC model, the past due interest is calculated very simply using the months past due, the current interest rate, and the current unpaid principle balance. From those numbers we can determine exactly what interest is accruing every month, and the number of months past due. Thus, we can determine what the past due interest is down to the dollar. If the bank is claiming on some of their disclosures that the past due interest is something other than this number…there must be a reason for it.
	36. **Lower L Q**	Here, we can see the lower left quadrant of the spreadsheet, which shows the unpaid principle balance adjusted for accrued interest and escrow. This cell is automatically populated but may need to be changed. We're still using the income of $3700, as in our previous test. In this example, we've lumped our taxes, insurance and HOA all into one number. So, we're looking at $286 now instead of breaking them out. For the **current value**, we can possibly find that number from the beneficiary's disclosures—the BPO. Or we may look at the tax value or a value from Zillow or Redfin. The **Home Price Appreciation Forecast**—you'll see this as negative 5%. Remember that this model was derived near the bottom or close to the bottom of the housing market so this model was created the homes really were depreciating. Currently, the FHFA (**Federal Housing Finance Agency**, which is the agency that oversees Fannie and Freddie) has estimated that in Washington, the current house appreciation is 9.4%. Other states have other appreciation values… in Arizona it's 21%, California it's 12%, Nevada 19%... Some of these rates are high and unsustainable. So the 9.4% for Washington may be a little optimistic. There are other assumptions built into the FDIC model, including the **REO Stigma Discount**. The REO Stigma discount is factored in because homes that are bought back by the bank and then sold sell for less than if the borrower sold the home outright. So the non-distressed properties always sell for more. Another assumption is the **time until the foreclosure sale**: that is, after the foreclosure sale, how long will it take to sell that REO property? The model also asks **"how much will it cost to sell the REO property"**? There could be attorneys' fees, trustees fees, eviction fees,bankruptcy expenses, title insurance, appraisal fees, and utilities all growing before the sale. All of these assumptions include a **net present value**: so even though the sale may be six months from now, we know that whatever value it receives six months from now is not worth today's "present" dollars. That's why it's very important to look at the Freddie Mac rate which is our discount rate. You must be sure that the discount rate is accurate, because the discount rate has as huge effect on the outcome of the test.
	37. **Upper R Q**	Here, we're looking at the upper right hand quadrant of the FDIC spreadsheet. Here we're looking at figures that assume modification whereas previously, on the left side, we were looking at scenarios where there is no modification. We can see that the modified payment entered is $861 and is the same as our CheckmyNPV equivalent.

		In our example, we can see if we extend the term to 30 years, the interest rate is lower than the floor so they have to use the 40 year term. Remember that these terms aren't from the data collection date—these are terms from the loan origination date. Here, our unpaid principle balance for the modified loan is the same as in HAMP. If we look here at our modified rate, it's 3.3%-- it's not at the floor. It ties into the modified loan term of 396 months (which is different than the 308 months from our Check My NPV test example). The reason for this is that when the interest rate is less than the program floor, the term is automatically extended by 120 months. The spreadsheet adds 120 months to the remaining term. We know the remaining term is 276 months, so if we add 120 months, we have a maximum modified loan term of 396 months. At 396 months, we can get a fully amortized loan simply by decreasing the interest rate to 3.3%. This really highlights one of the major differences between the FDIC and HAMP models. The FDIC model doesn't follow the same waterfall as the HAMP model. When looking for modified loan terms, you can use the HAMP test for the specific interest rate and loan term for a modified payment but you can use the FDIC test for the dollar value of the net present value. Remember: in the FDIC test, the modified payment of $861 dollars must be 10% less than the original. If it's not more than a 10% reduction, the spreadsheet will "fault out." When I say "fault out," you're not going to get any values for the rest of the spreadsheet. It doesn't necessarily mean that it's a pass or fail. It just means we don't know. If we look a little further down the spreadsheet we can see the present value of those modified payments and also the reduction from what they would be if they were unmodified. We can also see the re-default rate is 40%. The 40% figure is a default setting in the FDIC spreadsheet. Again, like the Price Appreciation forecast of -5%, this is a holdover from when the FDIC spreadsheet was constructed. At that time, they were seeing re-default rates of 40%. That's currently no longer the case.
	38. **Lower R Q**	This is the last quadrant in the FDIC spreadsheet, the lower right hand corner. Here, we can see the modification value. You'll notice here that it's a negative number: negative $53,000 and change. We're comparing this to the value of no modification that we found in the lower left quadrant of the spreadsheet, and we can see the benefit of modification is $48,000. That means the beneficiary will save $48,000 by modifying this loan versus not modifying the loan. And below that we see that this is a "Pass." So, again, when we were referring to an NPV "positive" we're looking at whether that benefit from modification number is a positive or negative number. Further on down the spreadsheet, we can see how the payment increases up to the current Freddie Mac rate. This is a similar step increase to what we see in HAMP.

	39. OCC Mortgage Metric Report	Here is another table from the OCC Mortgage Metrics Report which shows re-default rates. Looking at re-default rates three months after modification (which is what we specified in the FDIC test), we can see that government guaranteed loans have the highest re-deafult rate and Portfolio loans have the lowest re-default rate of 5%. The main reason for this is that the portfolio loans have fewer restrictions on which waterfall steps can be taken and thus have the greatest percentage of principle reductions. FHA loans or Government guaranteed loans have the highest re-default rate because they also have some of the highest restrictions on what the servicer can do. The re-default rate numbers here are taken from the major national banks (Wells Fargo, Bank of America, etc). This is data collected straight from them. In fact, these are the only industry numbers that we have to look at re-default rates. Notice that we have to enter the re-default percentage in the FDIC spreadsheet. When you're running the FDIC test, and you want enter the re-default rate, if you're unsure whether the loan is a Fannie, Freddie, a trust- or private investor-owned or portfolio loan, you can use the **overall rate of 8%.** In the HAMP model, some key factors used in determing the borrower's re-default rate are the borrower's current **credit score**, the **mark to market loan to value ratio** at the time of modification, the **months past due**, and the **front end debt to income ratio**, (both pre- and post-modification) "**Front end**" refers to the housing-only cost and **"back end"** refers to housing cost plus other installment loans. The last factor considered is **occupancy**-- whether it's owner-occupied or non-owner occupied. Each of these factors is an indicator of whether the borrower is going to default. The **mark to market loan to value ratio** is useful because, the borrower is more likely to re-default, the more underwater the mortgage is. The **debt to income ratio** is useful because, the borrower is more likely to re-default with a more unaffordable payment. **Occupancy** is useful data because, if the house is non-owner occupied, the borrower is more likely to re-default. These are just a few of the indicators that the HAMP model considers.
	40. Changing the re-default rate	For another example, we've changed the re-default rate from the 40% default in the FDIC spreadsheet to the 8% that is a more accurate current number. Using the same three months to re-default we can see a dramatic increase to the benefit to modification. The **re-default rate** is a very important factor in determining whether the borrower is going to receive a positive or negative NPV.
	41. Any model will only be as good as its inputs	Finally, here we have a few statistics from the 2012 SIGTARP report: - Notice that more than 160,000 HAMP-eligible homeowners have been turned down based on a NPV result. - The next statistic is quite startling… 149 HAMP applications were reviewed and of those, the servicers could provide accurate inputs and documentation for only two. That is, 147 of 149 applications had either inaccurate inputs, documentation or both.

		- Overall, 19% of inputs were either incorrect or not supported by documentation, which is quite a high number. In fact we see this in practice. Quite often the FDIC spreadsheets that the beneficiaries provide in their disclosures are quite inaccurate and contain a lot of erroneous numbers.
	42. Most Important Tips	And that concludes the presentation. As a brief recap of the key points: - Remember to always look at the **discount rate**, which is usually the Freddie Mac rate but may be higher in some cases. - Remember to always look at the **re-default rates** and confirm those are supported by documentation in the OCC's reports - In general just make verify all data inputs provided by both borrower and beneficiary. Thanks for listening.

Video Description for Vimeo or YouTube page:

A presentation created in April 2013 by Ariel Speser and Brian Haaland, Attorneys with the Northwest Justice Project's Foreclosure Prevention Unit.
Link: www.NWJustice.org

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